

# Automatic abdominal/waist massage for managing chronic constipation in older adults

<b>Submission date</b> 29/05/2025	<b>Recruitment status</b> Recruiting	<input type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
<b>Registration date</b> 30/05/2025	<b>Overall study status</b> Ongoing	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
<b>Last Edited</b> 30/05/2025	<b>Condition category</b> Digestive System	<input type="checkbox"/> Individual participant data <input checked="" type="checkbox"/> Record updated in last year

## Plain English summary of protocol

### Background and study aims

This study aims to determine whether combining lifestyle education with the use of a heated massage device applied to the waist and abdomen can help relieve chronic constipation symptoms in older adults.

### Who can participate?

We plan to recruit 90 individuals aged 65 and above who have symptoms of chronic constipation, as defined by the Rome IV criteria. Participants will be recruited from community-based long-term care facilities and the district public health center.

### What does the study involve?

Participants will be randomly assigned to one of two groups:

**Experimental group:** Will receive lifestyle education on managing constipation and use a certified heated massager (BSMI certification number R53615) designed for safe use on the waist and abdomen. This device provides gentle heat at approximately 40°C and features rotating rollers to massage these areas.

**Control group:** Will receive the same lifestyle education and use a certified heating pad (BSMI certification number R54317) designed for safe use on the waist and abdomen. This device provides gentle heat at approximately 40°C to warm these areas but does not offer massage. The intervention will last for four weeks, with sessions conducted five days per week. Each session will consist of 30 minutes, and participants can perform it either at home or at the facility. Before the intervention, we will collect baseline data and interview participants about their experiences with constipation. We will assess outcomes such as bowel movement frequency, use of laxatives, quality of life, and any side effects. Follow-up interviews will compare participants' experiences with the intervention to their previous constipation management strategies.

### What are the possible benefits and risks of participating?

Participants may experience improved bowel movements, relief from constipation symptoms, and reduced reliance on laxatives. Potential risks are minimal but may include mild discomfort from the massage or heat application.

Where is the study run from?

The study is being conducted in community-based long-term care facilities and the District Public Health Center in Taichung City, Taiwan.

When is the study starting and how long is it expected to run for?

The study is expected to start in January 2025 and will run for approximately 18 months, including recruitment, intervention, and follow-up.

Who is funding the study?

This study is initiated and funded by the principal investigator, Shiou Yung Huang.

Who is the main contact?

For more information, please contact:

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## Additional identifiers

**EudraCT/CTIS number**  
Nil known

**IRAS number**

**ClinicalTrials.gov number**  
Nil known

**Secondary identifying numbers**  
Nil Known

## Study information

**Scientific Title**  
Effects of automatic abdominal/waist massage in management of chronic constipation among older adults

**Acronym**  
EAMCOA

**Study objectives**  
Automatic abdominal/waist massage may stimulate intestinal peristalsis and relieve constipation symptoms in elderly individuals.

**Ethics approval required**  
Ethics approval required

**Ethics approval(s)**  
Approved 07/01/2025, Institutional Review Board A of National Yang Ming Chiao Tung University (No. 155, Sec. 2, Linong St. Beitou Dist., Taipei City, 112304, Taiwan; +886-2-28239753; irb.ym@nycu.edu.tw), ref: NYCU113084AF

**Study design**  
Two-arm parallel-group randomized controlled trial

**Primary study design**  
Interventional

**Secondary study design**  
Randomised parallel trial

**Study setting(s)**  
Care home, Community, Home

## Study type(s)

Treatment

## Participant information sheet

Not available in web format, please use contact details to request a participant information on sheet.

## Health condition(s) or problem(s) studied

Constipation

## Interventions

Participants were randomized into experimental and control groups. The experimental group received lifestyle modification education for constipation and a warm electric massage applied to the abdomen and waist. The control group received the same lifestyle education and warm compresses applied to the abdomen and waist. The intervention lasted four weeks, with sessions conducted five days per week. Each session included a 30-minute treatment, allocating 15 minutes each to the abdominal and waist regions.

## Intervention Type

Mixed

## Primary outcome measure

Data are collected at baseline (one week before the intervention) and at the end of the fourth intervention week, using questionnaires, participant diaries, a stethoscope, and face-to-face interviews

1. Spontaneous bowel movement frequency per week
2. The Bristol Stool Form Scale
2. Patient Assessment of Constipation Symptoms, PAC-SYM
3. Bowel sounds per minute
4. Adverse events

## Secondary outcome measures

Data are collected at baseline (one week before the intervention) and at the end of the fourth intervention week, using questionnaires, participant diaries, and MEAD meridian energy analysis device to evaluate participants' energy balance, and face-to-face interviews. The MEAD meridian energy device is certified under Taiwan FDA Medical Device License No. 002062.

1. Laxative usage
2. Patient Assessment of Constipation Quality of Life
3. Meridian energy

## Overall study start date

03/10/2024

## Completion date

14/06/2026

## Eligibility

### Key inclusion criteria

Adults aged 65 years and above who meet the Rome IV criteria for functional constipation.

**Participant type(s)**

Patient

**Age group**

Senior

**Lower age limit**

65 Years

**Upper age limit**

90 Years

**Sex**

Both

**Target number of participants**

90

**Key exclusion criteria**

1. Presence of tumors or vascular malformations in the lumbar or abdominal regions.
2. Cognitive impairment indicated by a score of less than 6 on the Short Portable Mental Status Questionnaire (SPMSQ).
3. Skin infections, injuries, bleeding, or thrombophlebitis in areas surrounding the lumbar or abdominal regions that may contraindicate massage therapy.
4. History of abdominal surgery within the past six months.
5. Diagnosed coagulation disorders or platelet function abnormalities.
6. Use of a cardiac pacemaker.
7. Osteoporosis requiring medical treatment.

**Date of first enrolment**

07/01/2025

**Date of final enrolment**

14/05/2026

**Locations****Countries of recruitment**

Taiwan

**Study participating centre****Wufeng District Public Health Center**

No. 1-9, Minsheng Rd., Wufeng Dist., Taichung City

Taichung City

Taiwan

413006

**Study participating centre**  
**Enoch Peaceful Residence Community Long-Term Care Facility**  
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## **Sponsor information**

**Organisation**  
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**Sponsor type**  
University/education

**Website**  
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**ROR**  
<https://ror.org/00se2k293>

## **Funder(s)**

**Funder type**  
Other

**Funder Name**  
Investigator initiated and funded

## **Results and Publications**

### **Publication and dissemination plan**

1. The research findings are planned to be presented orally at an international conference.
2. The results of this study will be submitted to high-impact international journals.

**Intention to publish date**

14/05/2027

**Individual participant data (IPD) sharing plan**

The individual participant data (IPD) collected during this study will not be made publicly available due to concerns regarding participant confidentiality. Given the sensitive nature of the data, there is a risk of re-identification. All data will be securely stored on encrypted servers at National Yang Ming Chiao Tung University and will be accessible only to authorized personnel.

**IPD sharing plan summary**

Not expected to be made available